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LISTE DE SEQUENCES

<110> CNRS
UNIVERSITE DE RENNES I
UNIVERSITE PAUL SABATIER TOULOUSE III

<120> NOUVELLES SEQUENCES PHOSPHORYLEES DE LA PHOSPHATASE CDC25B,
ANTICORPS DIRIGES CONTRE CES SEQUENCES AINSI QUE
LEUR UTILISATION

<130> WOB 03 BH CNR CD25

<150> FR 03/07095

<151> 2003-06-12

<160> 7

<170> PatentIn version 3.1

<210> 1

<211> 19

<212> PRT

<213> homo sapiens

<220>

<221> MOD_RES

<222> (10)..(10)

<223> PHOSPHORYLATION

<400> 1

Thr Pro Val Gln Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu
1 5 10 15

Gln Gln Glu

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<211> 14

<212> PRT

<213> homo sapiens

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<222> (7)..(7)

<223> PHOSPHORYLATION

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Gln Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu Gln
1 5 10

<210> 3

<211> 566

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (339)..(339)

<223> PHOSPHORYLATION

<400> 3

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 1 5 10 15
 Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu
 20 25 30
 Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala
 35 40 45
 Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly
 50 55 60
 Leu Gly Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala
 65 70 75 80
 Ser Glu Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly
 85 90 95
 Leu Cys Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln
 100 105 110
 Thr Phe Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu
 115 120 125
 Gln Phe Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly
 130 135 140
 His Ser Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly
 145 150 155 160
 Arg Arg Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu
 165 170 175
 Asp Lys Glu Asn Asp Gly Phe Val Phe Lys Met Pro Trp Lys Pro Thr
 180 185 190
 His Pro Ser Ser Thr His Ala Leu Ala Glu Trp Ala Ser Arg Arg Glu
 195 200 205
 Ala Phe Ala Gln Arg Pro Ser Ser Ala Pro Asp Leu Met Cys Leu Ser
 210 215 220
 Pro Asp Arg Lys Met Glu Val Glu Glu Leu Ser Pro Leu Ala Leu Gly
 225 230 235 240
 Arg Phe Ser Leu Thr Pro Ala Glu Gly Asp Thr Glu Glu Asp Asp Gly
 245 250 255
 Phe Val Asp Ile Leu Glu Ser Asp Leu Lys Asp Asp Asp Ala Val Pro
 260 265 270
 Pro Gly Met Glu Ser Leu Ile Ser Ala Pro Leu Val Lys Thr Leu Glu
 275 280 285
 Lys Glu Glu Glu Lys Asp Leu Val Met Tyr Ser Lys Cys Gln Arg Leu
 290 295 300
 Phe Arg Ser Pro Ser Met Pro Cys Ser Val Ile Arg Pro Ile Leu Lys
 305 310 315 320

Arg Leu Glu Arg Pro Gln Asp Arg Asp Thr Pro Val Gln Asn Lys Arg
 325 330 335
 Arg Arg Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala Glu Glu Pro
 340 345 350
 Lys Ala Arg Val Leu Arg Ser Lys Ser Leu Cys His Asp Glu Ile Glu
 355 360 365
 Asn Leu Leu Asp Ser Asp His Arg Glu Leu Ile Gly Asp Tyr Ser Lys
 370 375 380
 Ala Phe Leu Leu Gln Thr Val Asp Gly Lys His Gln Asp Leu Lys Tyr
 385 390 395 400
 Ile Ser Pro Glu Thr Met Val Ala Leu Leu Thr Gly Lys Phe Ser Asn
 405 410 415
 Ile Val Asp Lys Phe Val Ile Val Asp Cys Arg Tyr Pro Tyr Glu Tyr
 420 425 430
 Glu Gly Gly His Ile Lys Thr Ala Val Asn Leu Pro Leu Glu Arg Asp
 435 440 445
 Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile Ala Pro Cys Ser Leu Asp
 450 455 460
 Lys Arg Val Ile Leu Ile Phe His Cys Glu Phe Ser Ser Glu Arg Gly
 465 470 475 480
 Pro Arg Met Cys Arg Phe Ile Arg Glu Arg Asp Arg Ala Val Asn Asp
 485 490 495
 Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr Ile Leu Lys Gly Gly Tyr
 500 505 510
 Lys Glu Phe Phe Pro Gln His Pro Asn Phe Cys Glu Pro Gln Asp Tyr
 515 520 525
 Arg Pro Met Asn His Glu Ala Phe Lys Asp Glu Leu Lys Thr Phe Arg
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 Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg Ser Arg Arg Glu Leu Cys
 545 550 555 560
 Ser Arg Leu Gln Asp Gln
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<210> 4
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 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (312)..(312)
 <223> PHOSPHORYLATION

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1 5 10 15
Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu
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Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala
35 40 45
Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly
50 55 60
Leu Gly Ser Glu Thr Pro Lys Ser Gln Val Gly Thr Leu Leu Phe Arg
65 70 75 80
Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala Ser Glu
85 90 95
Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly Leu Cys
100 105 110
Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln Thr Phe
115 120 125
Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu Gln Phe
130 135 140
Ala Ile Arg Arg Phe Gln Ser Met Pro Asp Gly Phe Val Phe Lys Met
145 150 155 160
Pro Trp Lys Pro Thr His Pro Ser Ser Thr His Ala Leu Ala Glu Trp
165 170 175
Ala Ser Arg Arg Glu Ala Phe Ala Gln Arg Pro Ser Ser Ala Pro Asp
180 185 190
Leu Met Cys Leu Ser Pro Asp Arg Lys Met Glu Val Glu Glu Leu Ser
195 200 205
Pro Leu Ala Leu Gly Arg Phe Ser Leu Thr Pro Ala Glu Gly Asp Thr
210 215 220
Glu Glu Asp Asp Gly Phe Val Asp Ile Leu Glu Ser Asp Leu Lys Asp
225 230 235 240
Asp Asp Ala Val Pro Pro Gly Met Glu Ser Leu Ile Ser Ala Pro Leu
245 250 255
Val Lys Thr Leu Glu Lys Glu Glu Glu Lys Asp Leu Val Met Tyr Ser
260 265 270
Lys Cys Gln Arg Leu Phe Arg Ser Pro Ser Met Pro Cys Ser Val Ile
275 280 285
Arg Pro Ile Leu Lys Arg Leu Glu Arg Pro Gln Asp Arg Asp Thr Pro
290 295 300
Val Gln Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu Gln Gln
305 310 315 320

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Glu Ala Glu Glu Pro Lys Ala Arg Val Leu Arg Ser Lys Ser Leu Cys
 325 330 335

His Asp Glu Ile Glu Asn Leu Leu Asp Ser Asp His Arg Glu Leu Ile
 340 345 350

Gly Asp Tyr Ser Lys Ala Phe Leu Leu Gln Thr Val Asp Gly Lys His
 355 360 365

Gln Asp Leu Lys Tyr Ile Ser Pro Glu Thr Met Val Ala Leu Leu Thr
 370 375 380

Gly Lys Phe Ser Asn Ile Val Asp Lys Phe Val Ile Val Asp Cys Arg
 385 390 395 400

Tyr Pro Tyr Glu Tyr Glu Gly Gly His Ile Lys Thr Ala Val Asn Leu
 405 410 415

Pro Leu Glu Arg Asp Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile Ala
 420 425 430

Pro Cys Ser Leu Asp Lys Arg Val Ile Leu Ile Phe His Cys Glu Phe
 435 440 445

Ser Ser Glu Arg Gly Pro Arg Met Cys Arg Phe Ile Arg Glu Arg Asp
 450 455 460

Arg Ala Val Asn Asp Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr Ile
 465 470 475 480

Leu Lys Gly Gly Tyr Lys Glu Phe Phe Pro Gln His Pro Asn Phe Cys
 485 490 495

Glu Pro Gln Asp Tyr Arg Pro Met Asn His Glu Ala Phe Lys Asp Glu
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Leu Lys Thr Phe Arg Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg Ser
 515 520 525

Arg Arg Glu Leu Cys Ser Arg Leu Gln Asp Gln
 530 535

<210> 5
 <211> 580
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (353)..(353)
 <223> PHOSPHORYLATION

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Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu
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Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala
 35 40 45
 Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly
 50 55 60
 Leu Gly Ser Glu Thr Pro Lys Ser Gln Val Gly Thr Leu Leu Phe Arg
 65 70 75 80
 Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala Ser Glu
 85 90 95
 Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly Leu Cys
 100 105 110
 Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln Thr Phe
 115 120 125
 Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu Gln Phe
 130 135 140
 Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly His Ser
 145 150 155 160
 Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly Arg Arg
 165 170 175
 Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu Asp Lys
 180 185 190
 Glu Asn Asp Gly Phe Val Phe Lys Met Pro Trp Lys Pro Thr His Pro
 195 200 205
 Ser Ser Thr His Ala Leu Ala Glu Trp Ala Ser Arg Arg Glu Ala Phe
 210 215 220
 Ala Gln Arg Pro Ser Ser Ala Pro Asp Leu Met Cys Leu Ser Pro Asp
 225 230 235 240
 Arg Lys Met Glu Val Glu Glu Leu Ser Pro Leu Ala Leu Gly Arg Phe
 245 250 255
 Ser Leu Thr Pro Ala Glu Gly Asp Thr Glu Glu Asp Asp Gly Phe Val
 260 265 270
 Asp Ile Leu Glu Ser Asp Leu Lys Asp Asp Asp Ala Val Pro Pro Gly
 275 280 285
 Met Glu Ser Leu Ile Ser Ala Pro Leu Val Lys Thr Leu Glu Lys Glu
 290 295 300
 Glu Glu Lys Asp Leu Val Met Tyr Ser Lys Cys Gln Arg Leu Phe Arg
 305 310 315 320
 Ser Pro Ser Met Pro Cys Ser Val Ile Arg Pro Ile Leu Lys Arg Leu
 325 330 335
 Glu Arg Pro Gln Asp Arg Asp Thr Pro Val Gln Asn Lys Arg Arg Arg
 340 345 350

Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala Glu Glu Pro Lys Ala
 355 360 365
 Arg Val Leu Arg Ser Lys Ser Leu Cys His Asp Glu Ile Glu Asn Leu
 370 375 380
 Leu Asp Ser Asp His Arg Glu Leu Ile Gly Asp Tyr Ser Lys Ala Phe
 385 390 395 400
 Leu Leu Gln Thr Val Asp Gly Lys His Gln Asp Leu Lys Tyr Ile Ser
 405 410 415
 Pro Glu Thr Met Val Ala Leu Leu Thr Gly Lys Phe Ser Asn Ile Val
 420 425 430
 Asp Lys Phe Val Ile Val Asp Cys Arg Tyr Pro Tyr Glu Tyr Glu Gly
 435 440 445
 Gly His Ile Lys Thr Ala Val Asn Leu Pro Leu Glu Arg Asp Ala Glu
 450 455 460
 Ser Phe Leu Leu Lys Ser Pro Ile Ala Pro Cys Ser Leu Asp Lys Arg
 465 470 475 480
 Val Ile Leu Ile Phe His Cys Glu Phe Ser Ser Glu Arg Gly Pro Arg
 485 490 495
 Met Cys Arg Phe Ile Arg Glu Arg Asp Arg Ala Val Asn Asp Tyr Pro
 500 505 510
 Ser Leu Tyr Tyr Pro Glu Met Tyr Ile Leu Lys Gly Gly Tyr Lys Glu
 515 520 525
 Phe Phe Pro Gln His Pro Asn Phe Cys Glu Pro Gln Asp Tyr Arg Pro
 530 535 540
 Met Asn His Glu Ala Phe Lys Asp Glu Leu Lys Thr Phe Arg Leu Lys
 545 550 555 560
 Thr Arg Ser Trp Ala Gly Glu Arg Ser Arg Arg Glu Leu Cys Ser Arg
 565 570 575
 Leu Gln Asp Gln
 580

<210> 6
 <211> 601
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (374)..(374)
 <223> PHOSPHORYLATION

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Ala Gly Val Cys Gly Gly Ala Gln Arg Pro Gly His Leu Pro Gly Leu
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 Leu Leu Gly Ser His Gly Leu Leu Gly Ser Pro Val Arg Ala Ala Ala
 35 40 45
 Ser Ser Pro Val Thr Thr Leu Thr Gln Thr Met His Asp Leu Ala Gly
 50 55 60
 Leu Gly Ser Arg Ser Arg Leu Thr His Leu Ser Leu Ser Arg Arg Ala
 65 70 75 80
 Ser Glu Ser Ser Leu Ser Ser Glu Ser Ser Glu Ser Ser Asp Ala Gly
 85 90 95
 Leu Cys Met Asp Ser Pro Ser Pro Met Asp Pro His Met Ala Glu Gln
 100 105 110
 Thr Phe Glu Gln Ala Ile Gln Ala Ala Ser Arg Ile Ile Arg Asn Glu
 115 120 125
 Gln Phe Ala Ile Arg Arg Phe Gln Ser Met Pro Val Arg Leu Leu Gly
 130 135 140
 His Ser Pro Val Leu Arg Asn Ile Thr Asn Ser Gln Ala Pro Asp Gly
 145 150 155 160
 Arg Arg Lys Ser Glu Ala Gly Ser Gly Ala Ala Ser Ser Ser Gly Glu
 165 170 175
 Asp Lys Glu Asn Val Arg Phe Trp Lys Ala Gly Val Gly Ala Leu Arg
 180 185 190
 Glu Glu Glu Gly Ala Cys Trp Gly Gly Ser Leu Ala Cys Glu Asp Pro
 195 200 205
 Pro Leu Pro Ser Trp Leu Gln Asp Gly Phe Val Phe Lys Met Pro Trp
 210 215 220
 Lys Pro Thr His Pro Ser Ser Thr His Ala Leu Ala Glu Trp Ala Ser
 225 230 235 240
 Arg Arg Glu Ala Phe Ala Gln Arg Pro Ser Ser Ala Pro Asp Leu Met
 245 250 255
 Cys Leu Ser Pro Asp Arg Lys Met Glu Val Glu Glu Leu Ser Pro Leu
 260 265 270
 Ala Leu Gly Arg Phe Ser Leu Thr Pro Ala Glu Gly Asp Thr Glu Glu
 275 280 285
 Asp Asp Gly Phe Val Asp Ile Leu Glu Ser Asp Leu Lys Asp Asp Asp
 290 295 300
 Ala Val Pro Pro Gly Met Glu Ser Leu Ile Ser Ala Pro Leu Val Lys
 305 310 315 320
 Thr Leu Glu Lys Glu Glu Glu Lys Asp Leu Val Met Tyr Ser Lys Cys
 325 330 335

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Gln Arg Leu Phe Arg Ser Pro Ser Met Pro Cys Ser Val Ile Arg Pro
 340 345 350
 Ile Leu Lys Arg Leu Glu Arg Pro Gln Asp Arg Asp Thr Pro Val Gln
 355 360 365
 Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu Gln Gln Glu Ala
 370 375 380
 Glu Glu Pro Lys Ala Arg Val Leu Arg Ser Lys Ser Leu Cys His Asp
 385 390 395 400
 Glu Ile Glu Asn Leu Leu Asp Ser Asp His Arg Glu Leu Ile Gly Asp
 405 410 415
 Tyr Ser Lys Ala Phe Leu Leu Gln Thr Val Asp Gly Lys His Gln Asp
 420 425 430
 Leu Lys Tyr Ile Ser Pro Glu Thr Met Val Ala Leu Leu Thr Gly Lys
 435 440 445
 Phe Ser Asn Ile Val Asp Lys Phe Val Ile Val Asp Cys Arg Tyr Pro
 450 455 460
 Tyr Glu Tyr Glu Gly Gly His Ile Lys Thr Ala Val Asn Leu Pro Leu
 465 470 475 480
 Glu Arg Asp Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile Ala Pro Cys
 485 490 495
 Ser Leu Asp Lys Arg Val Ile Leu Ile Phe His Cys Glu Phe Ser Ser
 500 505 510
 Glu Arg Gly Pro Arg Met Cys Arg Phe Ile Arg Glu Arg Asp Arg Ala
 515 520 525
 Val Asn Asp Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr Ile Leu Lys
 530 535 540
 Gly Gly Tyr Lys Glu Phe Phe Pro Gln His Pro Asn Phe Cys Glu Pro
 545 550 555 560
 Gln Asp Tyr Arg Pro Met Asn His Glu Ala Phe Lys Asp Glu Leu Lys
 565 570 575
 Thr Phe Arg Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg Ser Arg Arg
 580 585 590
 Glu Leu Cys Ser Arg Leu Gln Asp Gln
 595 600

<210> 7
 <211> 588
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (361)..(361)
 <223> PHOSPHORYLATION

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<400> 7

Met	Glu	Val	Pro	Gln	Pro	Glu	Pro	Ala	Pro	Gly	Ser	Ala	Leu	Ser	Pro	1	5	10	15
Ala	Gly	Val	Cys	Gly	Gly	Ala	Gln	Arg	Pro	Gly	His	Leu	Pro	Gly	Leu	20	25	30	
Leu	Leu	Gly	Ser	His	Gly	Leu	Leu	Gly	Ser	Pro	Val	Arg	Ala	Ala	Ala	35	40	45	
Ser	Ser	Pro	Val	Thr	Thr	Leu	Thr	Gln	Thr	Met	His	Asp	Leu	Ala	Gly	50	55	60	
Leu	Gly	Ser	Glu	Thr	Pro	Lys	Ser	Gln	Val	Gly	Thr	Leu	Leu	Phe	Arg	65	70	75	80
Ser	Arg	Ser	Arg	Leu	Thr	His	Leu	Ser	Leu	Ser	Arg	Arg	Ala	Ser	Glu	85	90	95	
Ser	Ser	Leu	Ser	Ser	Glu	Ser	Ser	Glu	Ser	Ser	Asp	Ala	Gly	Leu	Cys	100	105	110	
Met	Asp	Ser	Pro	Ser	Pro	Met	Asp	Pro	His	Met	Ala	Glu	Gln	Thr	Phe	115	120	125	
Glu	Gln	Ala	Ile	Gln	Ala	Ala	Ser	Arg	Ile	Ile	Arg	Asn	Glu	Gln	Phe	130	135	140	
Ala	Ile	Arg	Arg	Phe	Gln	Ser	Met	Pro	Val	Arg	Leu	Leu	Gly	His	Ser	145	150	155	160
Pro	Val	Leu	Arg	Asn	Ile	Thr	Asn	Ser	Gln	Ala	Pro	Asp	Gly	Arg	Arg	165	170	175	
Lys	Ser	Glu	Ala	Gly	Ser	Gly	Ala	Ala	Ser	Ser	Ser	Gly	Glu	Asp	Lys	180	185	190	
Glu	Asn	Val	Arg	Phe	Trp	Lys	Ala	Gly	Val	Gly	Ala	Leu	Arg	Glu	Glu	195	200	205	
Glu	Gly	Ala	Cys	Trp	Gly	Gly	Ser	Leu	Ala	Cys	Glu	Asp	Pro	Pro	Leu	210	215	220	
Pro	Ser	Trp	Leu	Gln	Asp	Gly	Phe	Val	Phe	Lys	Met	Pro	Trp	Lys	Pro	225	230	235	240
Thr	His	Pro	Ser	Ser	Thr	His	Ala	Leu	Ala	Glu	Trp	Ala	Ser	Arg	Arg	245	250	255	
Glu	Ala	Phe	Ala	Gln	Arg	Pro	Ser	Ser	Ala	Pro	Asp	Leu	Met	Cys	Leu	260	265	270	
Ser	Pro	Asp	Arg	Lys	Met	Glu	Val	Glu	Glu	Leu	Ser	Pro	Leu	Ala	Leu	275	280	285	
Gly	Arg	Phe	Ser	Leu	Thr	Pro	Ala	Glu	Gly	Asp	Thr	Glu	Glu	Asp	Asp	290	295	300	
Gly	Phe	Val	Asp	Ile	Leu	Glu	Ser	Asp	Leu	Lys	Asp	Leu	Val	Met	Tyr	305	310	315	320

Ser Lys Cys Gln Arg Leu Phe Arg Ser Pro Ser Met Pro Cys Ser Val
 325 330 335
 Ile Arg Pro Ile Leu Lys Arg Leu Glu Arg Pro Gln Asp Arg Asp Thr
 340 345 350
 Pro Val Gln Asn Lys Arg Arg Arg Ser Val Thr Pro Pro Glu Glu Gln
 355 360 365
 Gln Glu Ala Glu Glu Pro Lys Ala Arg Val Leu Arg Ser Lys Ser Leu
 370 375 380
 Cys His Asp Glu Ile Glu Asn Leu Leu Asp Ser Asp His Arg Glu Leu
 385 390 395 400
 Ile Gly Asp Tyr Ser Lys Ala Phe Leu Leu Gln Thr Val Asp Gly Lys
 405 410 415
 His Gln Asp Leu Lys Tyr Ile Ser Pro Glu Thr Met Val Ala Leu Leu
 420 425 430
 Thr Gly Lys Phe Ser Asn Ile Val Asp Lys Phe Val Ile Val Asp Cys
 435 440 445
 Arg Tyr Pro Tyr Glu Tyr Glu Gly Gly His Ile Lys Thr Ala Val Asn
 450 455 460
 Leu Pro Leu Glu Arg Asp Ala Glu Ser Phe Leu Leu Lys Ser Pro Ile
 465 470 475 480
 Ala Pro Cys Ser Leu Asp Lys Arg Val Ile Leu Ile Phe His Cys Glu
 485 490 495
 Phe Ser Ser Glu Arg Gly Pro Arg Met Cys Arg Phe Ile Arg Glu Arg
 500 505 510
 Asp Arg Ala Val Asn Asp Tyr Pro Ser Leu Tyr Tyr Pro Glu Met Tyr
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 Ile Leu Lys Gly Gly Tyr Lys Glu Phe Phe Pro Gln His Pro Asn Phe
 530 535 540
 Cys Glu Pro Gln Asp Tyr Arg Pro Met Asn His Glu Ala Phe Lys Asp
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 Glu Leu Lys Thr Phe Arg Leu Lys Thr Arg Ser Trp Ala Gly Glu Arg
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